



## CLINICAL PRACTICE ARTICLE

# Poor communication by health care professionals may lead to life-threatening complications: examples from two case reports [version 1; peer review: 2 approved]

Abhishek Tiwary <sup>1</sup>, Ajwani Rimal<sup>1</sup>, Buddhi Paudyal <sup>1</sup>, Keshav Raj Sigdel<sup>1</sup>,  
Buddha Basnyat <sup>1,2</sup>

<sup>1</sup>Department of Internal Medicine, Patan Academy of Health Sciences, Lalitpur, Nepal

<sup>2</sup>Oxford University Clinical Research Unit, Patan hospital, Lalitpur, Nepal

**v1** First published: 22 Jan 2019, 4:7 (  
<https://doi.org/10.12688/wellcomeopenres.15042.1>)  
Latest published: 22 Jan 2019, 4:7 (  
<https://doi.org/10.12688/wellcomeopenres.15042.1>)

## Abstract

We report two cases which highlight the fact how poor communication leads to dangerously poor health outcome. We present the case of a 50-year-old woman recently diagnosed with rheumatoid arthritis from Southern Nepal presented to Patan hospital with multiple episodes of vomiting and oral ulcers following the intake of methotrexate every day for 11 days, who was managed in the intensive care unit. Similarly, we present a 40-year-old man with ileo-caecal tuberculosis who was prescribed with anti-tubercular therapy (ATT) and prednisolone, who failed to take ATT due to poor communication and presented to Patan Hospital with features of disseminated tuberculosis following intake of 2 weeks of prednisolone alone. These were events that could have been easily prevented with proper communication skills. Improvement of communication between doctors and patients is paramount so that life-threatening events like these could be avoided.

## Keywords

Communication, methotrexate, tuberculosis

## Open Peer Review

Reviewer Status

	Invited Reviewers	
	1	2
<b>version 1</b> published 22 Jan 2019	 report	 report
<p>1 <b>Sharad Onta</b>, Tribhuvan University, Kathmandu, Nepal Nepal Public Health Foundation, Kathmandu, Nepal</p> <p>2 <b>Jill Allison</b> , Memorial University of Newfoundland, St. John's, Canada</p> <p>Any reports and responses or comments on the article can be found at the end of the article.</p>		



This article is included in the Oxford University  
Clinical Research Unit (OUCRU) gateway.

**Corresponding author:** Abhishek Tiwary ([abhishektiwary@pahs.edu.np](mailto:abhishektiwary@pahs.edu.np))

**Author roles:** **Tiwary A:** Methodology, Writing – Original Draft Preparation, Writing – Review & Editing; **Rimal A:** Conceptualization, Methodology, Writing – Original Draft Preparation; **Paudyal B:** Conceptualization, Supervision, Writing – Review & Editing; **Sigdel KR:** Conceptualization, Supervision, Writing – Review & Editing; **Basnyat B:** Conceptualization, Methodology, Resources, Writing – Review & Editing

**Competing interests:** No competing interests were disclosed.

**Grant information:** This study was supported by the Wellcome Trust (106680).

*The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.*

**Copyright:** © 2019 Tiwary A *et al.* This is an open access article distributed under the terms of the [Creative Commons Attribution Licence](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

**How to cite this article:** Tiwary A, Rimal A, Paudyal B *et al.* **Poor communication by health care professionals may lead to life-threatening complications: examples from two case reports [version 1; peer review: 2 approved]** Wellcome Open Research 2019, 4:7 (<https://doi.org/10.12688/wellcomeopenres.15042.1>)

**First published:** 22 Jan 2019, 4:7 (<https://doi.org/10.12688/wellcomeopenres.15042.1>)

## Introduction

Communication refers to exchanging information with the help of different mediums, such as speaking, writing or body language<sup>1</sup>. It is of great importance in the field of medicine. Effective physician-patient communication is vital as it is related with favourable health outcomes such as increased patients satisfaction, compliance and overall health status<sup>2</sup>. A study in 2008 by Bartlett G *et al.* concluded that communication problems with patients lead to increased preventable adverse effects which were mostly drug-related<sup>3</sup>. It has been estimated that 27% of medical malpractice is the result of the communication failures. Better communication can reduce medical errors and patient injury<sup>4</sup>. Poor communication can result in various negative outcomes, such as decreased adherence to treatment, patients dissatisfaction and inefficient use of resources<sup>5</sup>. The cases discussed here highlight the importance of proper communication, how such unfortunate events could have been prevented with good communication skills. The traditional medical education curriculum in South Asia usually focuses more on technical expertise than teaching communication skills. This fact has hindered the capacity of technically expert health professionals to effectively communicate with their patients regarding the disease and treatment approach<sup>6,7</sup>. Thus, a concerted effort needs to be made to improve the communication skills of health professionals in South Asia.

## Case reports

### Case 1

A 50-year-old woman diagnosed with rheumatoid arthritis (RA) 3 weeks previously presented to Emergency Department of Patan Hospital in June of 2018 with complaints of multiple episodes of vomiting and oral ulcers for 5 days. She had a history of multiple joint pain for a year, for which she sought medical attention in New Delhi, India as her son used to work there. She visited New Delhi with her neighbour, and there was diagnosed with RA. As per the standard treatment of RA, her treating rheumatologist prescribed her 15 mg methotrexate once weekly and 5 mg folic acid twice weekly without emphasizing that methotrexate is to be taken weekly and not daily. The pharmacist also failed to stress the weekly dose schedule. Unfortunately, she consumed methotrexate 15 mg daily for 11 days. At 11th day, she presented with those above complaints to the National Medical College and Teaching Hospital near her home in Birgunj, in the southern plains of Nepal. There she was managed conservatively with folic acid and fluids for 2 days, then referred to our centre for further management. She had ongoing vomiting and her examination of the oral cavity revealed multiple erythematous and ulcerative lesions. Her total white blood cell count (WBC) was 2400/ $\mu$ l (normal range, 4000–11000/ $\mu$ l), with an absolute neutrophil count (ANC) of 1200/ $\mu$ l (normal range, 1500–8000/ $\mu$ l), haemoglobin of 9 g/dl (12–15 g/dl) and platelets of 84000/ $\mu$ l (150,000–450,000/ $\mu$ l). She was immediately admitted to the intensive care unit (ICU) for methotrexate toxicity (myelosuppression and mucositis). Her methotrexate was stopped and she was managed with leucovorin (15 mg once daily), GM-CSF (300  $\mu$ g once daily) and nasogastric feeding as she was unable to eat anything because of the oral ulcers.

After 3 days in the ICU, she was transferred to the ward, where treatment with leucovorin and GM-CSF was continued at

the same dose. She was discharged after a total of 11 days of hospital stay when her blood counts came back to within the normal range (WBC, 12300/ $\mu$ l; ANC, 6888/ $\mu$ l). Her haemoglobin increased to 13 g/dl and her platelet reached 340,000/ $\mu$ l. Her oral lesions subsided, and she was able to feed orally. She was started back on the correct dosage of methotrexate (15 mg once weekly) and counselled about the disease, medications (dosage and adverse effects) and was advised to follow up in rheumatology clinic. She has been followed-up every 3 months since then, is in remission and is taking medications properly.

### Case 2

A 40-year-old man from hills of Nepal presented to the emergency department of Patan Hospital in August 2018 with complaints of weakness in the right half of the body, deviation of the left side of the face and slurring of speech for 4 days. At 3 weeks prior to this, he had visited another tertiary level hospital in Kathmandu for pain in the lower abdomen and fever, where he was diagnosed as having ileo-cecal tuberculosis based on colonoscopy and biopsy with positive Ziehl-Neelson staining. He was then prescribed with antitubercular therapy (ATT) that included 3 tablets of Fixed dose combination consisting of isoniazid 75 mg, rifampicin 150 mg, pyrazinamide 400 mg and ethambutol 275 mg once daily and prednisolone 40 mg once daily. He was advised to take ATT from a health centre near his residence, whereas prednisolone was dispensed from the hospital pharmacy. Unfortunately, he just took prednisolone, but no ATT. As a result, he ended up in emergency with the aforementioned complaints. On evaluation, his chest x-ray showed features of pulmonary tuberculosis. Cerebral spinal Fluid (CSF) analysis was done which showed red blood cells (RBC) 200/ $\mu$ l (normal value, 0/ $\mu$ l), WBC 64/ $\mu$ l (normal range, 0–5/ $\mu$ l), neutrophil 24%, lymphocytes 64%, protein 294 mg/dl (normal range, 15–45 mg/dl) and sugar 49 mg/dl (normal range, 50–80 mg/dl). Cerebrospinal fluid GeneXpert testing was positive for *Mycobacterium tuberculosis*. He was then diagnosed as disseminated tuberculosis with meningeal involvement and was admitted to Patan Hospital with ATT (3 tablets of fixed-dose combination consisting of Isoniazid 75mg, Rifampicin 150 mg, Pyrazinamide 400 mg and Ethambutol 275mg once daily) and dexamethasone (6 mg three times a day) for 3 days. He was then discharged with ATT (same dose as above) and prednisolone (40 mg once daily) after proper counselling about the nature of the disease and site of availability of anti-tubercular drugs. He came in for follow-up after 2 weeks with improvement in the symptoms and has been taking all medications properly.

## Discussion

In the discussed cases, the treating physicians had used the standard treatment protocol to best serve their patients. They used their medical knowledge in an appropriate manner to treat the disease condition, but proper communication with clear-cut emphasis on how and when to take the therapy, which is of utmost importance in achieving an overall positive health impact, was lacking. Had the doctors properly counselled and educated the patients regarding the disease, treatment options and the correct way of taking medications, these mishaps could have been prevented. Another major part of the communication involves the judgment of the doctor in figuring out how much the patient

understood. As our patients were not literate, they could have explained about the disease and especially the weekly dosing of methotrexate and the availability and importance of ATT very clearly to the patient family. In South Asian countries like Nepal, the patient seldom is alone and therefore making things clear to the patient's family is obviously a very important option that needs to be utilized to improve communication against the background of rampant illiteracy. In Nepal, only 48.6% of the population is literate; hence this fact needs to be kept in mind when explaining about diseases and prescribing drugs, especially regarding medicines that have dangerous side-effects<sup>8</sup>.

In Nepal, 25.2% population fall below the poverty line and 3.2% population are unemployed<sup>9</sup>. The young working generation have to leave their house for better employment opportunities, meaning they aren't able to take care of their parents. In one of our cases, the son had to work in India for better employment opportunities and the patient came with her neighbour with whom the treating physician did not spend any time. It is possible that if the son had been there, he may well have been more concerned and asked more questions to the doctor. However, it is the responsibility of the health care professional to try to make sure the patient and their family have understood the matter clearly. There was also no caution mentioned by the pharmacy where the patient bought the medicine explaining the weekly (and not daily) dosing schedule of methotrexate. Hence there was failure of clear communication at various levels that led to this mishap.

Problems in doctor–patient communication have received little attention as a potential but a remediable cause of health hazards, especially in a setting like this one in South Asia. Communication during the medical interaction among the health practitioner and the patient has a pivotal role in creating a positive health impact that includes drug adherence, future decision

making on the interventions and modifying the health behaviours of the patient. We consider the cost and the negative impact on the outcome of the health from poor communication, which includes non-adherence to drugs regimens that will increase the burden of the cost of the total drug therapy, poor health outcomes, and unnecessary treatment and investigations. Different measures need to be considered to improve the communication between doctors and patients which would improve the overall health outcome. The measures include providing communication skills training to health care professionals and regular evaluation of communication skills of these professionals by interviewing the patients after a consultation.

## Conclusion

Clear communication is vital in the proper treatment of the patient especially against the background of rampant illiteracy in countries such as Nepal in South Asia. Poor Communication may lead to life-threatening complications, as in our patients. For better communication practice, proper communication training to health care professionals including pharmacists is paramount.

## Consent

Informed consent for publication of their clinical details, in the form of a fingerprint, was obtained from the patients.

## Data availability

All data underlying the results are available as part of the article and no additional source data are required.

## Grant information

This study was supported by the Wellcome Trust (106680).

*The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.*

## References

- Hornby A, Deuter M: **Oxford advanced learner's dictionary of current English**. Oxford: Oxford University Press, 2015.  
[Reference Source](#)
- Ong LM, de Haes JC, Hoos AM, *et al.*: **Doctor-patient communication: a review of the literature**. *Soc Sci Med*. 1995; **40**(7): 903–918.  
[PubMed Abstract](#) | [Publisher Full Text](#)
- Bartlett G, Blais R, Tamblyn R, *et al.*: **Impact of patient communication problems on the risk of preventable adverse events in acute care settings**. *CMAJ*. 2008; **178**(12): 1555–1562.  
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
- The Doctor Weighs In: **The Impact of Poor Communication on Medical Errors**. [online]. 2018. [Accessed 26 Oct. 2018].  
[Reference Source](#)
- Vermeir P, Vandijck D, Degroote S, *et al.*: **Communication in healthcare: a narrative review of the literature and practical recommendations**. *Int J Clin Pract*. 2015; **69**(11): 1257–67.  
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
- Choudhary A, Gupta V: **Teaching communications skills to medical students: Introducing the fine art of medical practice**. *Int J Appl Basic Med Res*. 2015; **5**(Suppl 1): S41–4.  
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
- Feinmann J: **Brushing up on doctors' communication skills**. *Lancet*. 2002; **360**(9345): 1572.  
[PubMed Abstract](#) | [Publisher Full Text](#)
- Worldpopulationreview.com. [online]. 2018. [Accessed 26 Oct. 2018].  
[Reference Source](#)
- Anon. [online]. 2018. [Accessed 26 Oct. 2018].  
[Reference Source](#)

# Open Peer Review

Current Peer Review Status:



Version 1

Reviewer Report 12 August 2019

<https://doi.org/10.21956/wellcomeopenres.16411.r36091>

© 2019 Allison J. This is an open access peer review report distributed under the terms of the [Creative Commons Attribution Licence](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.



**Jill Allison** 

Division of Community Health and Humanities, Faculty of Medicine, Memorial University of Newfoundland, St. John's, NL, Canada

- This article provides two cases where a lack of information and clear understanding of prescription medication contributed to morbidity and unnecessary suffering for the patients. The cases are linked to a lack of health professional engagement with the patient and failure to ensure full understanding of medication instructions. The cases and events surrounding are clearly described. The outcomes are also clearly described.
- The clinical scenario is well described but it would be helpful to know what steps were taken with these two patients to prevent similar circumstances. There is no mention of what was done to educate and inform the patient or their families on discharge. Was there an interdisciplinary team involved to try to ensure the patient got sufficient information and how was their level of comprehension assessed?
- There is a bit of repetition in the discussion and not many concrete suggestions for improving the skills of physicians in this area. Continuing medical education? Cultural competency teaching?
- There are a few grammatical errors that could be corrected to improve the paper.
- Overall, an important concept for discussion and excellent examples of why the discussion must happen.

**Is the background of the cases' history and progression described in sufficient detail?**

Yes

**Are enough details provided of any physical examination and diagnostic tests, treatment given and outcomes?**

Yes

**Is sufficient discussion included of the importance of the findings and their relevance to future understanding of disease processes, diagnosis or treatment?**

Partly

**Is the conclusion balanced and justified on the basis of the findings?**

Yes

**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** I teach in a Faculty of medicine and focus on issues related to patient engagement.

**I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.**

Reviewer Report 02 July 2019

<https://doi.org/10.21956/wellcomeopenres.16411.r35794>

© 2019 Onta S. This is an open access peer review report distributed under the terms of the [Creative Commons Attribution Licence](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.



**Sharad Onta**

Department of Community Medicine and Public Health, Institute of Medicine, Tribhuvan University, Kathmandu, Nepal

**Introduction:**

- This section should focus on contextual facts about the central issue of the manuscript, communication in clinical practice in the present context. It is better to avoid assessment of the contents of the cases and conclusion with recommendation.
- The statement “*The cases discussed here highlight the importance of proper communication, how such unfortunate events could have been prevented with good communication skills*” indicates to the assessment of upcoming contents of the manuscript. It seems inappropriate in the introduction. (It better fits in the discussion).
- The last phrase of this section “*Thus, a concerted effort needs to be made to improve the communication skills of health professionals in South Asia*” carries a notion of recommendation, which seems premature for this section of the manuscript. (It can be moved to the conclusion).
- It will be better to highlight the objective and rationale of presenting cases in this section. It provides the space for the authors to justify importance of communication in clinical practice.

**Cases:**

- Adequate exploration of the facts as the evidence of poor communication in health service/clinical practices and highlights of these facts (findings) are necessary in presentation of the cases for justification of explanations narrated in the section of discussion. The cases in the manuscript look weak, as the communication aspects are not adequately elaborated on. Elaboration of

communication dimension in the case presentation is desirable and, hence, suggested.

- As emphasized in the discussion section, and in the conclusion, of the manuscript, socio-economic characteristics of the service seekers are not clearly mentioned in the cases. Therefore, rationalization of importance of communication in the basis of these attributes is not well justifiable.

#### **Discussion:**

- The discussion should further attempt to establish credible links between doctor-patient communication and implications seen in the discussed cases. Other potential causes for such implications should be excluded to the best possible extent.

Few examples:

- In case 1 – it should be explored in depth whether the attitude and faith of patients to recover earlier by getting medicine in more (frequently) quantity than prescribed dose could be the reason for this situation.
- In case 2 – role of poor communication is not established clearly. Other possible reasons for not taking ATT like unavailability of medicines, distance to the health centres, and so on should be excluded to establish the role of communication. If prednisolone was the underlying cause of complication of the case, it should be analyzed, whether dispensing prednisolone alone without AT medicines to the patient was a right practice/protocol and correlate with the communication.

#### **Confidentiality:**

- In case 1 – name of the referring hospital as *National Medical College and Teaching Hospital* is mentioned whereas in the case 2 – it is mentioned as *another tertiary level hospital in Kathmandu*. It is better to maintain the consistency.

#### **Conclusion:**

- The conclusion is not well based in facts of cases. The manuscript has justified the importance of communication (in Nepal) in the background of *rampant illiteracy*. However, literacy and other socio-economic status of the patients in both cases are not known.

#### **General:**

- Language could be improved.
- Manuscript has addressed very relevant and useful issues. It should be considered for indexing after improvement incorporating all comments.

**Is the background of the cases' history and progression described in sufficient detail?**

Partly

**Are enough details provided of any physical examination and diagnostic tests, treatment given and outcomes?**

Partly

**Is sufficient discussion included of the importance of the findings and their relevance to future understanding of disease processes, diagnosis or treatment?**

Partly

**Is the conclusion balanced and justified on the basis of the findings?**

Partly

***Competing Interests:*** No competing interests were disclosed.

***Reviewer Expertise:*** My research area is public health policy

**I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.**

---